US005785842A

United States Patent [19]

Speck

[11] Patent Number: 5,785,842

[45] Date of Patent: Jul. 28, 1998

[54] **CORROSION PROTECTION MONITORING AND ADJUSTMENT SYSTEM**

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[21] Appl. No.: **619,125**

[22] Filed: **Mar. 20, 1996**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 422,799, Apr. 17, 1995, abandoned.

[51] **Int. Cl.**[6] **G01N 27/26**

[52] **U.S. Cl.** **205/777.5**; 205/776; 205/724; 205/730; 204/196; 204/197; 204/404; 340/856.3; 340/500; 340/505; 340/517; 340/645

[58] **Field of Search** 204/196, 197, 204/404; 205/775.5, 724, 730, 776; 340/856.3, 500, 505, 517, 645

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[57] **ABSTRACT**

A system for monitoring and alternatively adjusting the electrical energy input and output of remotely located corrosion protection rectifiers on a section of a longer pipeline includes three elements. The first element is a monitoring unit which monitors electrical input, output voltage, output amperage and level of applied cathodic protection of the electrical energy provided to the pipeline by a rectifier. This data on electrical energy is then transmitted to the second element, a low-level communication satellite. The low-level communication satellite then retransmits the data to the third element, a management data center. The information received at the management data center may be monitored, recorded or transformed into adjustment signals which are then retransmitted via the low-level communication satellite back to the rectifier on the pipeline.

15 Claims, 1 Drawing Sheet